IN THE CLAIMS:

1-52. (Cancelled)

53. (Previously Presented) A solid carbon product prepared by the process comprising:

(a) vaporizing a carbon source in the presence of an inert quenching gas under conditions effective to provide a sooty carbon product comprising C_{60} molecules;

(b) depositing the sooty carbon product on a collecting substrate;

(c) removing the sooty carbon product form the collecting substrate;

(d) contacting the sooty carbon product with a non-polar organic solvent effective to dissolve C_{60} molecules, said solvent being present in an amount effective to dissolve the C_{60} molecules in said sooty carbon product; and

(e) recovering from said resulting product formed when the sooty carbon product was contacted with said solvent a solid carbon product comprising C_{60} in a macroscopic amount.

54. (Previously Presented) The solid carbon product of Claim 53 in which the carbon in step (a) is vaporized in an evacuated reactor.

55. (Previously Presented) The solid carbon product of Claim 54 in which the carbon source of step (a) is vaporized in an evacuated bell jar.

56. (Previously Presented) The solid carbon product of Claim 53 in which the carbon source subject to vaporization in step (a) is graphite.

57. (Previously Presented) The solid carbon product of Claim 53 in which the carbon source subject to vaporization in step (a) is graphite rods.

58. (Previously Presented) The solid carbon product of Claim 53 wherein the carbon source is vaporized in step (a) through heating the carbon source by means of an electrical current of sufficient intensity to produce the sooty carbon product.

59. (Previously Presented) The solid carbon product of Claim 58 wherein the electrical current is about 100 amps.

60. (Previously Presented) The solid carbon product of Claim 53 wherein the inert quenching gas of step (a) is a noble gas.

61. (Previously Presented) The solid carbon product of Claim 53 wherein the carbon source is vaporized in step (a) at a pressure ranging from 50 torr to 400 torr.

62. (Previously Presented) The solid carbon product of Claim 61 wherein the carbon is vaporized in step (a) at approximately 100 torr.

63. (Previously Presented) The solid carbon product of Claim 53 wherein the carbon is vaporized in step (a) at a pressure ranging from about 2 to 3 atmospheres.

64. (Previously Presented) The solid carbon product of Claim 53 wherein the collecting

substrate in step (b) is a glass surface.

65. (Previously Presented) The solid carbon product of Claim 60 wherein the inert gas is helium or argon.

66. (Previously Presented) The solid carbon product of Claim 53 wherein the non-polar organic solvent of step (d) is carbon dissulfide, benzene, carbon tetrachloride or toluene.

67. (Previously Presented) The solid carbon product of Claim 66 wherein the solvent is benzene.

68. (Previously Presented) The solid carbon product of Claim 66 wherein the solvent is carbon tetrachloride.

69. (Previously Presented) The solid carbon product of Claim 53 wherein recovery step (e) comprises evaporating the solvent.

70. (Previously Presented) The solid carbon product of Claim 53 further comprising C_{70}.

71. (Previously Presented) The solid carbon product of Claim 53 further comprising:

(f) purifying the carbon product of step (e) to obtain C_{60}.

72. (Currently Amended) The solid product of Claim 71 wherein the purification of step (f) is

sublimation at 300-400°C, ~~fractional crystallization, column~~ chromatography, capillary electrophoresis, crystallization or extraction.

73. (Previously Presented) A formed or molded product comprising crystalline C_{60}.

74. (Cancelled)

75. (Previously Presented) A free flowing particulate comprised of crystalline C_{60}.

76.-79. (Cancelled)

80. (Previously Presented) A formed or molded product comprising solid C_{70}.

81. (Previously Presented) A free-flowing particulate comprising solid C_{70}.

82.-83. (Cancelled)

84. (Previously Presented) Substantially pure C_{60}.

85. (Previously Presented) Substantially pure solid C_{60}.

86. (Previously Presented) C_{60} in a macroscopic amount.

87.-88. (Cancelled)

89. (Previously Presented) Substantially pure C_{70}.

90. (Previously Presented) Substantially pure solid C_{70}.

91. (Cancelled)

92. (Previously Presented) Crystalline C_{60}.

93. (Previously Presented) Crystalline C_{70}.

94. (Previously Presented) Substantially pure crystalline C_{60}.

95. (Previously Presented) Substantially pure crystalline C_{70}.

96. (Previously Presented) C_{70} in a macroscopic amount.

97.-101. (Cancelled)

102. (Previously Presented) A macroscopic amount of substantially pure C_{60}.

103. (Previously Presented) A macroscopic amount of substantially pure C_{70}.

104. (Previously Presented) A formed or molded product comprising C_{70}, said C_{70} being present in a macroscopic amount.

105. (Previously Presented) A free flowing particulate comprising C_{70}, said C_{70} being present in a macroscopic amount.

106. (Previously Presented) A formed or molded product comprising C_{60}, said C_{60} being present in a macroscopic amount.

107. (Previously Presented) A free flowing particulate comprising C_{60}, said C_{60} being present in a macroscopic amount.

108.-110. (Cancelled)

111. (Previously Presented) A solid comprising C_{60}, said C_{60} being present in a macroscopic amount.

112. (Previously Presented) A solid comprising C_{70}, said C_{70} being present in a macroscopic amount.

113. (Previously Presented) A sooty product comprising C_{60}, the C_{60} in said sooty product being present in sufficient concentration to allow a macroscopic amount of said C_{60} to be separated therefrom.

114. (Previously Presented) A sooty product comprising C_{70}, the C_{70} in said sooty product being present in sufficient concentration to allow a macroscopic amount of said C_{70} to be separated therefrom.

115.-118. (Cancelled)

119. (Previously Presented) A sooty carbon product prepared by the process comprising:

(a) vaporizing a carbon source in the presence of an inert gas to provide a vapor of carbon atoms,

(b) quenching said vapor of carbon in said inert gas under conditions effective to nucleate and condense said vapor of carbon atoms into a sooty carbon product comprising C_{60} molecules, said C_{60} molecules being present in said sooty carbon in sufficient concentrations to allow a macroscopic amount of C_{60} to be separated from said soot.

120.-121. (Cancelled)

122. (Previously Presented) The sooty carbon product of Claim 113, additionally comprising C_{70}.

123. (Previously Presented) The sooty carbon product of Claim 119 additionally comprising

C_{70}.

124. (Previously Presented) The sooty carbon product of Claim 119 in which the carbon source subject to vaporization in step (a) is graphite or amorphous or glassy carbon.

125. (Previously Presented) The sooty carbon product of Claim 119 in which the carbon source subject to vaporization in step (a) is graphite.

126. (Previously Presented) The sooty carbon product of Claim 119 in which the carbon source subject to vaporization in step (a) is graphite rods.

127. (Previously Presented) The sooty carbon product of Claim 119 in which the carbon source in step (a) is vaporized in an evacuated reactor.

128. (Previously Presented) The sooty carbon product of Claim 119 in which the carbon source in step (a) is vaporized in an evacuated bell jar.

129. (Previously Presented) The sooty carbon product of Claim 119 in which the inert gas is a noble gas.

130. (Previously Presented) The sooty carbon product of Claim 129 in which the noble gas is helium or argon.

131. (Previously Presented) The sooty carbon product of Claim 119 in which the process is conducted at a pressure sufficient to nucleate said carbon vapor.

132. (Previously Presented) The sooty carbon product of Claim 131 in which the pressure ranges from 60 torr to 400 torr.

133.-140. (Cancelled)

141. (Previously Presented) A solid carbon product prepared by the process comprising:

(a) evaporating a carbon source in the presence of an inert quenching gas under conditions effective to produce a sooty carbon product containing C_{60}, said C_{60} being present in said sooty carbon product in sufficient concentration to allow a macroscopic amount of said C_{60} to be separated from said sooty product;

(b) collecting the sooty carbon product produced therefrom;

(c) subliming the carbon product comprising C_{60} from the sooty carbon product; and

(d) condensing the sublimed carbon product comprising C_{60}.

142. (Previously Presented) The solid carbon product of Claim 141 wherein the sublimation occurs at a temperature ranging from 300°-400°C.

143. (Previously Presented) The solid carbon product of Claim 142 wherein step (c) comprises heating the carbon product comprising C_{60} in a vacuum or inert atmosphere at effective

sublimation temperatures to extract the carbon product comprising C_{60} from said sooty carbon product.

144. (Previously Presented) The solid carbon product of Claim 141 in which the carbon source in step (a) is vaporized in an evacuated reactor.

145. (Previously Presented) The solid carbon product of Claim 144 in which the carbon in step (a) is vaporized in an evacuated bell jar.

146. (Previously Presented) The solid carbon product of Claim 141 in which the carbon subject to vaporization in step (a) is graphite.

147. (Previously Presented) The solid carbon product of Claim 141 in which the carbon subject to vaporization in step (a) is graphite rods.

148. (Previously Presented) The solid carbon product of Claim 141, wherein the carbon source in step (a) is vaporized by passing an electric current of sufficient intensity to produce a sooty carbon product.

149. (Previously Presented) The solid carbon product of Claim 148, wherein the electrical current is about 100 amps.

150. (Previously Presented) The solid carbon product of Claim 141, wherein the inert

quenching gas of step (a) is a noble gas.

151. (Previously Presented) The solid carbon product of Claim 141, wherein the carbon source in step (a) is vaporized at a pressure ranging from 50 torr to 400 torr.

152. (Previously Presented) The solid carbon product of Claim 151, wherein the carbon source is vaporized in step (a) at approximately 100 torr.

153. (Previously Presented) The solid carbon product of Claim 53, wherein the collecting substrate in step (b) is a glass surface.

154. (Previously Presented) The solid carbon product of Claim 150, wherein the noble gas is helium or argon.

155. (Previously Presented) The solid carbon product of Claim 141, wherein C_{70} is additionally present.

156. (Currently Amended) The solid carbon product of Claim 155, wherein C_{70} is separated from C_{60} by ~~sublimination, column~~ sublimation, chromatography, fractional crystallization, capillary electrophoresis, ~~HPLC, preparative thin layer chromatography,~~ or extraction.

157. (Previously Presented) The solid carbon product of Claim 155, wherein the C_{70} is separated from C_{60} by sublimation.

158.-161. (Cancelled)

162. (Previously Presented) The solid carbon product according to Claim 155, wherein the C_{70} is present in a macroscopic amount.

163.-164. (Cancelled)

165. (Previously Presented) A solid comprising a macroscopic amount of crystalline C_{60}.

166. (Previously Presented) A solid comprising a macroscopic amount of crystalline C_{70}.

167. (Previously Presented) A carbon product comprising a macroscopic amount of solid C_{60}.

168. (Previously Presented) A carbon product comprising a macroscopic amount of solid C_{70}.

169. (Previously Presented) The carbon product of Claim 167, wherein the solid C_{60} is crystalline C_{60}.

170. (Previously Presented) The carbon product of Claim 168, wherein the solid C_{70} is crystalline C_{70}.

171.-180. (Cancelled)